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### NOTICE OF ALLOWANCE AND FEE(S) DUE

57339

**CIMA** 

7590

LERNER, DAVID ET AL

WESTFIELD, NJ 07090

600 SOUTH AVENUE WEST

09/04/2008

EXAMINER

RAMACHANDRAN, UMAMAHESWARI

ART UNIT

PAPER NUMBER

1617

DATE MAILED: 09/04/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,693	09/14/2000	Sathasivan Indiran Pather	CIMA 3.0-030 CONT II	2096

TITLE OF INVENTION: SUBLINGUAL BUCCAL EFFERVESCENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$0	\$1440	12/04/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

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IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

### PART B - FEE(S) TRANSMITTAL

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or <u>Fax</u> (571)-273-2885

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APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO	O. CONFIRMATION NO.	
09/661,693 TITLE OF INVENTION	09/14/2000 I: SUBLINGUAL BUCC	CAL EFFERVESCENT	Sathasivan Indiran Pather	•	CIMA 3.0-030 CONT	II 2096	
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) I	DUE DATE DUE	
nonprovisional	NO	\$1440	\$O	\$0	\$1440	12/04/2008	
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RAMACHANDRAN,	, UMAMAHESWARI	1617	424-434000	J			
"Fee Address" ind PTO/SB/47; Rev 03-0 Number is required.  3. ASSIGNEE NAME A PLEASE NOTE: Unl	ND RESIDENCE DATA less an assignee is ident h in 37 CFR 3.11. Com	" Indication form ned. Use of a Customer A TO BE PRINTED ON ified below, no assignee	(1) the names of up to or agents OR, alternati (2) the name of a sing registered attorney or 2 registered patent attolisted, no name will be THE PATENT (print or ty data will appear on the pT a substitute for filing an (B) RESIDENCE: (CITY	vely, le firm (having as a agent) and the name rorneys or agents. If n printed.  pe) latent. If an assigne assignment.	member a 2s of up to o name is 3e is identified below, the	ne document has been filed for	
Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):	Individual 🖵 Co	poration or other private	e group entity 🗖 Government	
	are submitted: No small entity discount p # of Copies	permitted)	<ul> <li>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</li> <li>A check is enclosed.</li> <li>Payment by credit card. Form PTO-2038 is attached.</li> <li>The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).</li> </ul>				
5. Change in Entity Sta  a. Applicant claim	tus (from status indicate as SMALL ENTITY state		☐ b. Applicant is no lon	ger claiming SMAL	L ENTITY status. See 3	37 CFR 1.27(g)(2).	
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accepte tes Patent and Trademarl	ed from anyone other than			or the assignee or other party in	
Authorized Signature				Date			
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LERNER, DAV			ART UNIT	PAPER NUMBER			
	600 SOUTH AVENUE WEST WESTFIELD, NJ 07090				8		

# **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	L A P C N	A P (1-)
	Application No.	Applicant(s)
	09/661,693	PATHER ET AL.
Notice of Allowability	Examiner	Art Unit
	UMAMAHESWARI RAMACHANDRAN	1617
The MAILING DATE of this communication appearance All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this ap or other appropriate communication IGHTS. This application is subject to	plication. If not included n will be mailed in due course. <b>THIS</b>
1. This communication is responsive to <u>5/27/2008</u> .		
2. X The allowed claim(s) is/are 22, 25, 27, 30-33, 83, 86, 88, 9	91, 93, 94, 105, 106-110 will be renu	mbered as 1-19.
<ul> <li>3.</li></ul>	e been received. e been received in Application No cuments have been received in this of this communication to file a reply MENT of this application.  eitted. Note the attached EXAMINER es reason(s) why the oath or declara est be submitted. son's Patent Drawing Review ( PTO-	national stage application from the complying with the requirements as AMENDMENT or NOTICE OF ation is deficient.
Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t		
DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT	sit of BIOLOGICAL MATERIAL i	must be submitted. Note the
<ul> <li>Attachment(s)</li> <li>1. ☐ Notice of References Cited (PTO-892)</li> <li>2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)</li> <li>3. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 5/23/200</li> <li>4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ul>	5. ☐ Notice of Informal F 6. ☐ Interview Summary Paper No./Mail Da 7. ☐ Examiner's Amendi 8. ☑ Examiner's Stateme 9. ☐ Other	(PTO-413), te

### **DETAILED ACTION**

The examiner notes the receipt of the amendments and remarks received in the office on 5/27/2008. The claims 1-21, 23-26, 28, 29, 34-82, 84-85, 87, 89, 90, 92, 95-104 have been cancelled and claims 106-110 have been added new. Claims 22, 25, 27, 30-33, 83, 86, 88, 91, 93, 94, 105, 106-110 are free of prior art and are ready for allowance. The claims will be renumbered as 1-19.

## **Application Priority**

The present application is a continuation application of United States Patent Application No. 09/277,424 filed March 26, 1999 (Abandoned). The present invention claims the benefit of the United States Provisional Application No. 60/079 652 filed on March 27, 1998 and the claim for priority is acknowledged.

### **REASONS FOR ALLOWANCE**

The provisional rejection of claims 22, 25-27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 11/026,132 ('132), the provisional rejection of claims 22, 25-27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 11/027,353 ('353), the provisional rejection of Claims 22, 25-27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27, 29-33 of copending Application No. 11, 511, 098 ('098), the provisional rejection of Claims 22, 30, 33, 91, 93, 94, 105 rejected under the

judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 15 of copending Application No. 11, 521, 796 ('796) are withdrawn because the instant application is the earlier filed application of all the pending applications.

The rejection of claims 22, 26, 27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under 35 U.S.C. 103(a) as being unpatentable over McCarty (US 5,073,374) in view of Wehling et al. (WO 91104757) and further in view of Streisand et al. (Buccal absorption of fentanyl is pH-dependent in dogs', Anesthesiology, (1995 Mar), 82 (3), pp. 759-64), the rejection of claims 22, 26, 27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under 35 U.S.C. 103(a) as being unpatentable over Wehling et al. (WO 91104757) in view of McCarty (US 5,073,374) and further in view of Streisand et al. (Buccal absorption of fentanyl is pH-dependent in dogs', Anesthesiology, (1995 Mar), 82 (3), pp. 759-64), the rejection of claims 22, 26, 27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under 35 U.S.C. 103(a) as being unpatentable over Streisand (Anesthesiology, 1991, 75(2), 223-9) in view of Streisand et al. (Buccal absorption of fentanyl is pH-dependent in dogs', Anesthesiology, (1995 Mar), 82 (3), pp. 759-64) and further in view of Wehling et al. (WO 91104757), the rejection of claims 22, 26, 27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under 35 U.S.C. 103(a) as being unpatentable over Norling et al (U.S. 5,958458) in view of Wehling et al. (WO 91104757), the rejection of claims 22, 25-27, 30-33, 83, 84, 86, 88, 91, 93, 94 and 105 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. ('Studies on formulations of fentanyl buccal adhesive tablets", Zhongquo Yiyao Gongye Zazhi, 1997, 28(3), 129-1311) in view of Wehling et al. (WO 91104757) and

Page 4

further in view of Streisand et al. ("Buccal absorption of fentanyl is pH-dependent in dogs', Anesthesiology, (1995 Mar), 82 (3), pp. 759-64) are withdrawn in view of the declaration dated 4/25/2006 and applicants arguments/remarks dated 5/27/2008.

The following is an examiner's statement of reasons for allowance:

Claims 22, 25, 27, 30-33, 83, 86, 88, 91, 93, 94, 105, 106-110 are drawn to a tablet comprising a pharmaceutically effective amount of fentanyl for oral administration across the oral mucosa, including buccal, sublingual and gingival administration, at least one pH adjusting substance, at least one saliva activated effervescent couple, up to 20 % weight of a non-effervescent disintegration agent. The closest prior art of record to the claimed invention are McCarty (US 5,073,374), Wehling et al. (WO 91104757), Streisand et al. (Buccal absorption of fentanyl is pH-dependent in dogs', Anesthesiology, (1995 Mar), 82 (3), pp. 759-64), Streisand (Anesthesiology, 1991, 75(2), 223-9) Norling et al (U.S. 5,958458) and Chen et al. ('Studies on formulations of fentanyl buccal adhesive tablets", Zhongguo Yiyao Gongye Zazhi, 1997, 28(3), 129-1311).

McCarty et al. teaches fast dissolving buccal tablets particularly useful for the administration of active ingredients that show poor bioavailability upon administration through non-parenteral modes and such active ingredients include analgesics such as fentanyl. The prior art does not teach the effervescent couple or the pH adjusting substance in the composition. Wehling et al. teach effervescent dosage forms for direct oral administration comprising 5 to about 50 % effervescent disintegration agents (a soluble acid source and a carbonate source) and adjuvants such as binders, flavors,

colors, fillers, non-effervescent disintegrants, etc. The reference teaches that analgesics are among the drugs that can be administered in oral effervescent dosage forms. The reference teach that the effervescence disintegration agent is present in an amount effective to aid in disintegration of the tablet, and to provide distinct sensation of effervescence when the tablet is placed in the mouth of a patient. The reference does not teach an oral transmucosal tablet and the pH adjusting substance and fentanyl as the specific analgesic in the effervescent dosage form. Streisand et al. teach that the buccal absorption, bioavailability and permeability of fentanyl are pH dependent and increase as the pH of the fentanyl solution becomes more basic, which is due to an increase in the fraction of unionized fentanyl. The reference does not teach a oral transmucosal tablet or the effervescent couple in the composition. The reference teaches that a pH adjusting substance added to fentanyl enhances absorption of the drug. Applicants' by declaration by Dr. Vikas Agarwal show unexpected results that a composition comprising fentanyl, effervescent couple and pH adjusting substance has superior permeability values when compared to addition of effervescent couple or pH adjusting substance to fentanyl. The data showed by the applicants in the declaration teach that the claimed combination of fentanyl, an effervescent agent and a pH adjusting substance was superior to the composition with fentanyl and pH adjusting substance or fentanyl and effervescent agent alone. The permeability value of fentanyl + effervescent couple + pH adjusting substance was 95.6 % (400% greater than the formulation with only one of the two required components) compared to fentanyl + effervescent couple 23.3 %, compared to fentanyl + pH adjusting substance 18.7%.

Hence the claims of the instant invention are allowable in view of the unexpected results shown by the applicants in formulating fentanyl with the effervescent couple and pH adjusting substance. Norling et al. teach active substances in particulate formulations comprising effervescent disintegrants, a pharmaceutically inert carrier such as magnesium carbonate. Fentanyl is one of the active substances in the array of active substances listed in the reference. Norling et al. does not teach in any examples a formulation comprising fentanyl, effervescent couple and pH adjusting substance nor does it teach the amount of the disintegrating agents. One having ordinary skill in the art would not have any motivation to pick fentanyl form the list of active substances from Norling's teachings. Chen teaches fentanyl citrate buccal adhesive tablets. Chen et al. do not teach the effervescent couple or the pH adjusting substance in the formulation. As stated above, in view of the Applicants' declaration the claims are allowable over the prior art of record as unexpected results are shown in formulating fentanyl with the effervescent couple and pH adjusting substance. Applicants' have shown by declaration that the combination of a pH adjusting substance and an effervescent agent with fentanyl is superior to the use of either alone in an otherwise identical formulation.

The claims are allowable over the closest art of record because they do not teach or disclose the claimed formulation of fentanyl with a pH adjusting substance and an effervescent agent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Umamaheswari Ramachandran whose telephone number is 571-272-9926. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 09/661,693 Page 8

Art Unit: 1617

/SREENI PADMANABHAN/

Supervisory Patent Examiner, Art Unit 1617